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Education and Ethnic Prejudice in Europe: explanations for cross-national variances in the educational effect on ethnic prejudice

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ABSTRACT *Education is often found to be a strong determinant of ethnic prejudice. However, there is preliminary evidence that this educational effect varies across countries. Moreover, there are also theoretical arguments to expect cross-national variances in the educational effect on ethnic prejudice. From both a cultural and structural perspective, we set out to explain these cross-national variances in the educational effect. Results of multilevel analyses on data from 11 European countries show that the cultural perspective is more fruitful to explain cross-national variances in the strength of the educational effect on ethnic prejudice than the structural perspective: a country's democratic tradition and degree of religious heterogeneity are important for the strength of the educational effect on ethnic prejudice, whereas a country's ethnic composition and unemployment rate are less relevant.*

Keywords: *education; ethnic prejudice; cross-national comparisons*

INTRODUCTION

Since World War II, in reaction to Nazi racism, many researchers have tried to explore and explain ethnic prejudice (Myrdal, 1944; Adorno *et al.*, 1950; Allport, 1954). From the early days on, education has proven to be one of the strongest determinants of white Americans' ethnic prejudice. This relationship is one of the most consistent findings in the field of inter-ethnic relations (Schuman *et al.*, 1997; Vogt, 1997): higher educated individuals turn out to be less prejudiced against ethnic minorities than lower educated individuals. Moreover, this educational effect remains strong, even after controlling for numerous other individual

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characteristics, such as social class, age, etc. This consistent effect has predominantly been interpreted as the *universal* liberalizing effect of education: the educational system was considered to be the most important socializing agent to transmit liberal values in order to reduce ethnic intolerance and ethnic prejudice (Selznick & Steinberg, 1969; Hyman & Wright, 1979).

This educational effect on ethnic prejudice has not only been found among white Americans, but also among native Europeans. In several European countries, where research on inter-ethnic relations became more and more important due to increasing numbers of ethnic minorities, a strong negative association between education and ethnic prejudice has been established (Eisinga & Scheepers, 1989; Jenssen & Engesbak, 1994; Knudsen, 1995; Wagner & Zick, 1995; Pedersen, 1996; Coenders, 2001). However, some cross-national studies, mostly dealing with European countries, brought into question the presumed *universality* of the liberalizing effect of education, since it turned out that in some countries, education was only a moderate determinant of ethnic prejudice or tolerance (see for example Muller *et al.*, 1980; Radio Free Europe/Radio Liberty, 1980; Weil, 1982, 1985; McIntosh *et al.*, 1995; Billiet *et al.* 1996) [1]. Thus, these studies suggest that there are cross-national variances in the strength of the educational effect on ethnic prejudice.

There are also theoretical arguments to expect cross-national variances in the educational effect. First, from a *cultural perspective*, education can be considered to reflect the degree of exposure to the educational system. If we assume that in different countries different values may be transmitted through the educational system (cf. Weil, 1985; Jenssen & Engesbak, 1994), then it is likely that there will be cross-national variances in the strength of the educational effect on ethnic prejudice. Second, as we look at education from a *structural perspective*, we can consider education as an indicator of social status, i.e. education refers to one's position in society. Then, if we assume that there may be cross-national variances in the extent to which people feel their position to be threatened by ethnic minorities (cf. Jackman & Muha, 1984), and since ethnic prejudice has been shown to be a response to these perceived threats (cf. Quillian, 1995; Scheepers *et al.*, 2002), it is likely that there will be cross-national variances in the educational effect on ethnic prejudice.

Previous cross-national studies on the relationship between education and ethnic prejudice or tolerance suffered from several deficiencies. Some studies were carried out in a small set of countries (Weil, 1982, 1985; McIntosh *et al.*, 1995) and some contained incomparable measurements (Weil, 1982, 1985). Furthermore, some studies did not attempt to explain variances in the strength of the educational effect (Radio Free Europe/Radio Liberty, 1980), whereas other studies did not test these explanations systematically at the country level (Muller, 1980; Weil, 1982, 1985; McIntosh *et al.*, 1995; Coenders, 2001). Moreover, these explanations only considered education from a cultural perspective.

In this contribution we will deal with these deficiencies. We are able to do so, since: first of all, we have data on many different European countries, i.e. on both western democracies and former state socialist countries; second, these data were collected in a comparable way, containing comparable measurements (Jagodzinski &

Dobbelaere, 1999); third, we set out to systematically test whether there are cross-national variances in the strength of the educational effect. Finally, we will test explanations for these cross-national variances in line with the distinction between the cultural and structural perspective on education.

EDUCATION AND ETHNIC PREJUDICE FROM A CULTURAL PERSPECTIVE

First, we will consider education as the degree of exposure to an important socializing agent, i.e. the educational system, in which pupils are taught the dominant norms of society (see for example Dreeben, 1968; Selznick & Steinberg, 1969; Hyman & Wright, 1979). Moreover, we assume that the higher one's education, the longer one has been exposed to society's dominant norms and the more one has internalized society's dominant norms (cf. Selznick & Steinberg, 1969; Collins, 1971).

Without doubt, there are cross-national variances in the dominant norms of society (Inglehart, 1990; Halman, 1991), since these depend on a country's historical and political tradition. Moreover, the values that are transmitted by a country's educational system reflect the political culture of that country, since, according to socialization theory, a country's communal leaders determine to a certain degree which norms and values are transmitted at school [2]. Furthermore, which norms and values are actually transmitted may depend on country characteristics, in particular a country's democratic tradition and religious heterogeneity (Weil, 1985).

Democratic Tradition

Weil (1985) mentioned a country's democratic tradition as an explanatory factor for cross-national variances in the strength of the relationship between education and prejudice. Since tolerance for other (religious or ethnic) groups is a very important feature of a democratic society, it is to be expected that in countries with a longstanding democratic tradition, people have been exposed to these tolerant values at school. The higher one's education, the longer one has been exposed to these tolerant values and, therefore, the effect of education on ethnic prejudice will be relatively strong in longstanding democracies. In contrast, in countries with an interrupted democratic tradition (such as Italy and Portugal) [3] democratic values have been taught for a shorter period of time at school. In these countries it is not a matter of course that democratic values are transmitted at school, as in longstanding democracies. Due to the interruption in democracy, democratic values may have been neglected at school, at least for some time. Furthermore, when democracy was restored it may have taken some time before the influence of former totalitarian regimes on the educational system was erased. Due to less or a shorter lived exposure to liberal values, the educational effect on ethnic prejudice will be weaker in interrupted democracies.

Moreover, we expect that the effect of education on ethnic prejudice will be even weaker in former state socialist societies, since former state socialist leaders

denied social or ethnic cleavages. Former state socialist societies were, at least to some extent, designed to be homogeneous in social and ethnic terms (Dawisha, 1990; Tismaneanu, 1992). With the socialist revolution, educational systems in state socialist societies became crucial agents of socialization with the declared aim of educating the 'new man' and of reshaping and strengthening a new socio-economic order (Meier, 1989). Moreover, the educational system of these countries has been described as uniform, highly centralized and under the control of the state and the political hegemony of the communist parties, with a considerable degree of standardization, with centrally licensed textbooks, with the purpose of highly formalized outcomes (Meier, 1989). Therefore, we expect that the educational system in former state socialist countries may have been less inclined to reduce ethnic prejudice. As a consequence, there may be hardly any difference between the well educated and the poorly educated with respect to the degree of exposure to liberal values, such as tolerance towards other (ethnic) groups. Therefore, we expect the effect of education on ethnic prejudice to be relatively weak in countries with a recent democratic tradition.

In short, we assume that the higher one's education, the longer one has been exposed to the values that have been transmitted at school. The content of these values depends in turn on the democratic tradition of that country. Therefore, we expect a country's democratic tradition to affect the strength of the educational effect on ethnic prejudice. The effect of education on ethnic prejudice in countries with an interrupted democratic tradition will be relatively weak compared to countries with a longstanding democratic tradition. Moreover, in countries with a recent democratic tradition, the effect of education on ethnic prejudice will be even weaker.

Religious Heterogeneity

Weil (1985) also mentioned a country's religious heterogeneity as a determinant of cross-national variances in the strength of the educational effect. He suggested that particularly in religiously heterogeneous societies, communal leaders may try to promote accommodation between segments of the population and set out to decrease intergroup tensions in order to preserve social cohesion (see for example Lijphart, 1977). In order to achieve this, communal leaders may try to transmit an ideology of accommodation to the educational system that is, in turn, more likely to instill tolerant attitudes and thereby reduce intergroup tensions. In contrast, in religiously homogeneous countries, the need to reduce intergroup tensions may be relatively small, due to the absence of serious religious cleavages. Therefore, communal leaders of these countries may not feel a strong need to promote tolerance. As a consequence, less attention will be paid to tolerance and respect for other (ethnic) groups at school. We argue that a country's degree of religious heterogeneity affects the educational effect on ethnic prejudice: the more religiously heterogeneous a country is, the stronger the educational effect on ethnic prejudice will be.

Contrary to the above mentioned assumption, there is another branch of theories from which a contradictory hypothesis can be deduced. According to

religious competition theory, the religious market is assumed to be like any other economic market: the more suppliers, the more competition (Stark & Iannaccone, 1994). From this line of reasoning it follows that the more heterogeneous, and hence competitive, the religious economy of a country is, the more 'investments' will be made by religious organizations, i.e. denominations, to establish and preserve a market share. As in commercial economies, this can be achieved by means of advertising: our religious product is better than the product of other denominations (cf. Stark & Bainbridge, 1987, pp. 44–49). In countries with a high level of religious heterogeneity or competition, religious leaders are more inclined to promote their religion as the only true religion. As a consequence, in highly religiously heterogeneous or competitive countries, the educational effect will be weakened by religious heterogeneity. Based on this line of reasoning, it can be expected that the more religiously heterogeneous a country is, the weaker the educational effect on ethnic prejudice will be.

EDUCATION AND ETHNIC PREJUDICE FROM A STRUCTURAL PERSPECTIVE

Education may also be considered as an indicator of social status, i.e. it refers to one's position in society. Those individuals who are well educated have more chance of obtaining a high status job and of earning a fair income; in short, the better educated enjoy an advantaged position in society compared to the poorly educated (Blau & Duncan, 1967; Shavit & Blossfeld, 1993). Moreover, there is a relationship between one's position in society and ethnic prejudice and this relationship may vary across countries, as explained by theories of ethnic competition.

Ethnic Competition

According to ethnic competition theory (Coser, 1956; Blalock, 1967; LeVine & Campbell, 1972; Olzak, 1992), social (or ethnic) groups compete for scarce resources (e.g. in the labour or housing market).The level of competition one experiences, either at the individual or at the contextual level, will affect one's level of ethnic prejudice [4]. However, since we are interested in cross-national variances in the educational effect on ethnic prejudice, we will focus on the contextual level. At the contextual level, actual *ethnic* competition for scarce resources, will rise if (i) an increasing number of people from different ethnic groups compete for, *ceteris paribus*, the same amount of scarce resources or (ii) or a decreasing amount of scarce resources are competed for by, *ceteris paribus*, the same number of people from different ethnic groups (cf. Coenders & Scheepers, 1998).This implies that even if there is no shortage of scarce resources but the relative number of people making up ethnic minorities is very high, people may perceive ethnic minorities as a threat to their socio-economic well-being. On the other hand, if the economic conditions are not very prosperous, i.e. if the rate of unemployment is high, but the relative number of people from ethnic minority groups is relatively low, then these ethnic minorities may also be considered to be a threat.

Particularly in highly competitive conditions, those with the least resources (the poorly educated) are more likely to perceive ethnic minorities as a threat than those with more resources (the well educated) (Quillian, 1995). As a consequence, the less educated will be more inclined to ethnic prejudice than the well educated. Moreover, if the actual situation is not that competitive, those with the least resources will not perceive that much threat and, therefore, their ethnic prejudice will not differ sharply from those with more resources. In short, the more ethnic competition there is in a country, i.e. the higher the rate of unemployment or the higher the percentage of ethnic minorities, the stronger the educational effect on ethnic prejudice in that country will be.

DATA AND MEASUREMENTS

We tested our hypotheses with data stemming from the cross-national survey *Religious and Moral Pluralism* (Jagodzinski and Dobbelaere, 1999). These data have been collected using face-to-face interviews with people aged 18 years and older in 11 European countries (Belgium, Denmark, Finland, Great Britain, Hungary, Italy, The Netherlands, Norway, Poland, Portugal and Sweden) in 1998. The data are well suited to our purposes because they contain valid, detailed and cross-national comparable measures on ethnic prejudice and education. In each country the sample was drawn according to a multi-stage random design (for more information see Jagodzinski and Dobbelaere, 1999). Since we are interested in the level of ethnic prejudice of the native born people, we only included them in the analyses.

Ethnic Prejudice

Ethnic prejudice is measured by presenting the following three items to respondents: 'Immigrants are no less intelligent than the [nationals]', 'Immigrants are no less trustworthy than the [nationals]' and 'Immigrants are no less hard-working than the [nationals]'. Respondents indicated on seven point scales to what extent they agreed or disagreed with these items (from 'strongly disagree' to 'strongly agree'). In the introduction to the items, respondents were referred to particular groups of immigrants that were particularly visible and relevant in their country. Although this is a valid way to solve problems of cross-national comparisons, we cannot rule out the possibility that between-country differences are due to the presence of different immigrant groups in the respective countries. This type of Likert measurement is one of the most frequently employed procedures in this line of research, considered to provide valid and reliable information (cf. Quillian 1995; Billiet *et al.*, 1996). Tests for reliability, contained in Table I, show Cronbach α values ranging between 0.54 in Poland to 0.78 in Finland. The overall reliability, computed on the pooled sample, is satisfactory (0.71). By computing the mean of the answers to these three questions, a scale has been constructed. Thereafter, we computed means and standard deviations for the scale to obtain a glimpse of cross-country differences, again contained in Table I. It appears that some countries are rather high on ethnic prejudice, like Hungary, Poland, Italy and Belgium, whereas countries like Sweden and Denmark are rather low in this respect.

TABLE I. Reliability of the scale for ethnic prejudice (Cronbach's α values) and description of ethnic prejudice and education in 11 European countries

	Ethnic prejudice[a]			Education[b]		
	Cronbach's α	Mean	SD	Mean	SD	*n*
Belgium	0.60	3.11	1.40	3.02	1.20	1633
Denmark	0.71	2.45	1.31	2.65	1.44	586
Finland	0.78	3.05	1.43	2.83	1.25	757
Great Britain	0.76	2.71	1.32	3.09	0.78	1332
Hungary	0.73	3.94	1.52	2.02	1.37	956
Italy	0.79	3.22	1.59	2.54	1.20	2135
The Netherlands	0.59	2.58	1.24	3.32	0.86	981
Norway	0.73	2.53	1.31	2.29	1.18	480
Poland	0.54	3.56	1.34	2.13	1.14	1118
Portugal	0.58	2.88	1.37	2.17	1.21	956
Sweden	0.66	2.21	1.16	3.05	1.28	970
All countries	0.71	3.00	1.46	2.71	1.24	11,904

[a]Ethnic prejudice (seven point scale):
(1) immigrants are no less intelligent than the [nationals]; (2) immigrants are no less trustworthy than the [nationals]; (3) immigrants are no less hard-working than the [nationals].

[b]Education consists of five categories:
(1) (in)complete primary; (2) incomplete secondary; (3) secondary completed; (4) incomplete university; (5) university completed.

Education

To measure education, we used information on the highest level of education completed by respondents. A cross-national comparative categorization has been used, ranging from (1) (in)complete primary, (2) incomplete secondary, (3) secondary completed, (4) university incomplete to (5) university degree completed. In Table I the means and standard deviations for education have been computed for each country, to obtain a glimpse of cross-national differences.

Other Individual Characteristics

Differences between social classes were previously found to be important in the explanation of ethnic prejudice, therefore, we included employment as a control variable. We distinguish between the categories employed (the reference category), self-employed, unemployed, retired and other people not active in the labour force (e.g. housewives/househusbands and students). Unfortunately, the data do not allow a distinction between different social classes based on their actual position in the labour force (except for the self-employed class). Another important measure of socio-economic position, i.e. income, cannot be used, as it is not available for the four Scandinavian countries. In this data set religiosity is measured in a detailed way, however, we will make use of the most direct or conventional indicator, namely

respondents' church attendance. The measurement of church attendance is a straightforward question on the frequency of church attendance, ranging from never to several times a week. To ascertain the curvilinearity of the effect of church attendance on prejudice, we included both the first and the second order power of church attendance in the equation, as prescribed by Berry and Feldman (1985) to detect non-linearity [5]. As other control variables we included straightforward measures of gender (0 = female, 1 = male) and age (18 years and older). Finally, we added community size, measured on a scale from 1, 'less than 500 inhabitants', to 10, 'more than 1 million inhabitants'.

National Characteristics

National characteristics are contained in Appendix A. We placed the countries in one of three categories on the basis of their democratic tradition and computed dummy variables for each of these categories, namely longstanding democracy, interrupted democracy or recent democracy. The degree of religious heterogeneity was measured by aggregating individual religious denominations to the country level (derived from the *Religious and Moral Pluralism* data). For each country one minus the sum of the squared proportions of the different denominations was computed. To take the number of denominations in each country into account, this figure was divided by one minus the inverse of the number of categories. The religious heterogeneity index is 0 when all citizens of a particular country are of the same denomination. The larger the index is, the more religiously heterogeneous a country is (i.e. the more people are evenly spread over different denominations).

For the country characteristics measuring ethnic competition we use valid international statistics on the proportion of non-nationals and unemployment. Figures on the number of non-nationals as a percentage of the total population were taken from the OECD (1998) and Hagendoorn *et al.* (1995). Figures on unemployment were derived from the *Yearbook of Labour Statistics* (International Labour Office, 1998).

THE BIVARIATE RELATIONSHIP BETWEEN EDUCATION AND ETHNIC PREJUDICE

In Table II the distribution of educational level and the average level of ethnic prejudice in each educational category across 11 countries is presented. As can be seen from Table II, the distribution of respondents over the educational categories varies across countries: in Hungary, Poland and Portugal there are a relatively large number of poorly educated respondents compared to, for example, The Netherlands and Sweden, where a relatively large number of respondents are well educated.

As we explore the bivariate relationship between education and ethnic prejudice, we notice that in almost every country the least educated are the most prejudiced, whereas the most educated are the least prejudiced. Overall, we see that as educational level increases the level of ethnic prejudice gradually diminishes. In

TABLE II. The percentual distribution of education, the mean ethnic prejudice for each educational level, the deviation from linearity (F) of the relationship between education and ethnic prejudice and the (η) value of this relationship in 11 European countries

		Education (%)	Ethnic prejudice ($\bar{X}$)	Deviation from linearity (F)	η
Belgium	(1) (In)complete primary	12.1	3.41		
	(2) (In)complete secondary	21.1	3.43		
	(3) Secondary completed	32.9	3.18		
	(4) Incomplete university	20.6	2.85		
	(5) University completed	13.2	2.56	2.23	0.212
Denmark	(1) (In)complete primary	23.9	2.72		
	(2) (In)complete secondary	36.7	2.64		
	(3) Secondary completed	8.7	2.06		
	(4) Incomplete university	11.8	2.11		
	(5) University completed	18.9	2.14	1.74	0.212
Finland	(1) (In)complete primary	19.6	3.33		
	(2) (In)complete secondary	14.1	3.30		
	(3) Secondary completed	44.4	3.04		
	(4) Incomplete university	7.1	2.65		
	(5) University completed	14.8	2.63	0.57	0.714
Great Britain	(1) (In)complete primary	–	–		
	(2) (In)complete secondary	15.7	3.17		
	(3) Secondary completed	70.8	2.72		
	(4) Incomplete university	2.6	2.28		
	(5) University completed	11.0	2.07	0.69	0.220
Hungary	(1) (In)complete primary	60.0	4.10		
	(2) (In)complete secondary	–	–		
	(3) Secondary completed	26.6	3.81		
	(4) Incomplete university	2.5	4.08		
	(5) University completed	10.1	3.23	3.25	0.177
Italy	(1) (In)complete primary	20.7	3.76		
	(2) (In)complete secondary	33.2	3.36		
	(3) Secondary completed	26.9	3.02		
	(4) Incomplete university	9.6	2.56		
	(5) University completed	9.6	2.81	12.25[a]	0.233
The Netherlands	(1) (In)complete primary	5.8	3.47		
	(2) (In)complete secondary	–	–		
	(3) Secondary completed	59.1	2.71		
	(4) Incomplete university	26.1	2.23		
	(5) University completed	9.0	2.12	2.55	0.265
Norway	(1) (In)complete primary	17.3	2.58		
	(2) (In)complete secondary	7.3	3.05		
	(3) Secondary completed	45.0	2.66		
	(4) Incomplete university	19.6	2.22		
	(5) University completed	10.8	2.06	5.91[a]	0.203

TABLE II. *Continued*

		Education (%)	Ethnic prejudice ($\bar{X}$)	Deviation from linearity (F)	η
Poland	(1) (In)complete primary	30.5	3.61		
	(2) (In)complete secondary	46.1	3.59		
	(3) Secondary completed	12.4	3.63		
	(4) Incomplete university	2.2	3.28		
	(5) University completed	8.8	3.20	1.73	0.091
Portugal	(1) (In)complete primary	35.1	3.15		
	(2) (In)complete secondary	36.0	2.93		
	(3) Secondary completed	14.0	2.60		
	(4) Incomplete university	6.7	2.36		
	(5) University completed	8.2	2.34	0.89	0.207
Sweden	(1) (In)complete primary	19.6	2.53		
	(2) (In)complete secondary	3.1	1.99		
	(3) Secondary completed	47.6	2.30		
	(4) Incomplete university	12.3	1.96		
	(5) University completed	17.4	1.84	3.12	0.206

$n = 11{,}904$ (-: less than 20 respondents in this category).
[a]$P < 0.05$.

most countries, except for Italy and Norway, the relationship between education and ethnic prejudice does not deviate from linearity, as the F statistic for the deviance from linearity is not significant ($P < 0.05$). In Italy the deviation from linearity may be caused by the highest educational category, those who completed university: they are slightly more prejudiced than those with an incomplete university education. In Norway this deviation from linearity may be caused by those with the lowest level of education, i.e. those who did not attend more than primary school; this category is less prejudiced than those who attended and/or completed secondary school. As these are only minor deviations, we consider the relationship between education and ethnic prejudice to be linear since, overall, this relationship follows the same pattern: the higher one's education, the lower one's ethnic prejudice.

Moreover, it seems that there are indeed cross-national differences in the educational effect on ethnic prejudice, which may be derived from differences in the η statistic. The η statistic varies from 0.091 in Poland to 0.265 in The Netherlands, meaning that in Poland the association between education and ethnic prejudice is rather weak, whereas this association is rather strong in The Netherlands. However, before reaching conclusions, we will first test these cross-national variances in a multivariate way.

TABLE III. The estimation of different multilevel models to explain the educational effect on ethnic prejudice in 11 European countries

Model		–2*loglikelihood	Δ–2*loglikelihood	Δ df
0	Intercept	42871.34		
1	0 + random variation at country level	41705.62	1165.69	1
2a	1 + education	41284.94	420.68	1
2b	2a + random slope for education	41266.79	18.15	2
3	2b + individual controls	41109.44	157.35	9
4	3 + country characteristics	41083.86	23.61	5
5	4 + cross-level interactions	41064.14	19.58	5

MULTILEVEL ANALYSIS

The nature of these data is such that they are hierarchically structured: individuals are nested within countries. Ignoring the fact that individuals are clustered within countries may cause serious (technical) problems. For example, ignoring clustering will generally cause standard errors of regression coefficients to be underestimated. This in turn could lead to incorrect confirmation of hypotheses. Correct standard errors will be estimated only if variation at the country level (besides variation at the individual level) is allowed in the analysis. Multilevel modelling provides an efficient way of doing this (Snijders & Bosker, 1999). Another advantage of multilevel analysis is that it allows simultaneous modelling of individual level and country level effects, as well as cross-level interactions: interactions between country characteristics and effects at the individual level (in this case the effect of education on ethnic prejudice). To estimate these multilevel models we used the software package MLwiN (Goldstein, 1995).

MODELS

The results of the modelling procedure are displayed in Table III, which contains goodness-of-fit for the different models that explain ethnic prejudice. The goodness-of-fit of the different models is indicated by the -2*loglikelihood statistic, also called the deviance. Actually, this statistic indicates lack-of-fit, since the lower the deviance, the better the fit. The deviance follows a χ^2 distribution with degrees of freedom equal to the number of parameters to be estimated.

We started by estimating a null model that includes an intercept that allows for variation at the individual level only. Next, we allowed the intercept to vary across individuals as well as across countries (model 1). We see that this change leads to a large improvement in the model fit. This is indicated by a decrease in the loglikelihood statistic of 1166 with 1 degree of freedom. This indicates that there are not only differences between individuals' scores on ethnic prejudice, but also between countries' levels of ethnic prejudice.

Since we are primarily interested in the effect of education on ethnic prejudice, we added the education variable in the next model (2a). The inclusion of education improved the model significantly (a decrease of the loglikelihood statistic of 421 with 1 degree of freedom). This indicates that education is very important in explaining ethnic prejudice. However, since we are interested in cross-national variances in the educational effect, we also included a random slope for education which allows the educational effect to vary across countries (model 2b). Once again this improved the model significantly (a change of 18 in the loglikelihood statistic with 2 degrees of freedom), indicating that the educational effect does vary across countries.

To this random slope model we added individual control variables, such as gender, age and social position (model 3). This again improved the model's goodness-of-fit significantly (a change of 157 in the loglikelihood statistic, df = 9). Since we hypothesized that ethnic prejudice is affected by certain country characteristics, we added these country characteristics in the next step. We included two dummy variables to measure democratic tradition, a religious heterogeneity index, the unemployment rate and the percentage of non-nationals in model 4. The inclusion of these country characteristics also led to a significant improvement in the model (see Table III).

Finally, since we are interested in explaining cross-national variances in the educational effect on ethnic prejudice, we added cross-level interactions between the above mentioned country characteristics and the educational effect on ethnic prejudice (model 5). By doing so, we checked whether the strength of a country's educational effect is affected by certain country characteristics. These cross-level interactions are the final addition to our model and improved the model's goodness-of-fit significantly (a change of 20 in the loglikelihood statistic, df = 5).

RESULTS

The results of the multilevel modelling procedure are presented in Table IV. This table contains unstandardized parameter estimates, which are comparable with parameters from conventional multiple regression analysis. At the bottom of the table we present variance components, at both the individual and country levels. The variance reduction between models is related to the explanatory power of the models we estimated (Snijders and Bosker, 1999).

Since we are interested in explaining cross-national variances in the educational effect and the random slope model turned out to be a significant improvement in the model (see Table III), we start by describing the results for model 2b, the random slope model. In model 2b the general effect of education on ethnic prejudice over all countries is displayed. This general educational effect on ethnic prejudice is rather strong (− 0.22) and significant. This means that, over all countries, the higher one's education, the lower one's ethnic prejudice, exactly as we expected the effect to be. In order to obtain the strength of the educational effect for each country separately, we added country residuals to this general educational effect [6]. The educational effects, computed for each country separately, are shown in Figure 1. As one can

TABLE IV. Parameter estimates from multilevel models on ethnic prejudice in 11 European countries (standard errors between brackets)

	Model				
	1	2b[d]	3	4	5
Intercept	2.93 (0.15)[c]	3.55 (0.14)[c]	3.24 (0.16)[c]	1.85 (0.24)[c]	1.56 (0.29)[b]
Education		− 0.22 (0.02)[c]	− 0.19 (0.02)[c]	− 0.19 (0.03)[c]	− 0.05 (0.06)
Other individual characteristics					
Employed (ref.)					
Self-employed			0.12 (0.04)[c]	0.12 (0.04)[c]	0.12 (0.04)[c]
Unemployed			0.01 (0.06)	0.01 (0.06)	0.01 (0.06)
Pensioned			0.12 (0.04)[c]	0.12 (0.04)[c]	0.12 (0.04)[c]
Other non-employed			− 0.03 (0.04)	− 0.03 (0.04)	− 0.03 (0.04)
Age			0.01 (0.00)[c]	0.01 (0.00)[c]	0.01 (0.00)[c]
Male			0.17 (0.03)[c]	0.17 (0.03)[c]	0.17 (0.03)[c]
Church attendance			0.04 (0.03)	0.04 (0.03)	0.03 (0.03)
Church attendance squared			− 0.01 (0.00)	− 0.01 (0.00)[a]	− 0.01 (0.00)[a]
Community size			− 0.02 (0.01)[c]	− 0.02 (0.01)[c]	− 0.02 (0.01)[c]
Country characteristics					
longstanding democracy (ref.)					
Interrupted democracy				0.45 (0.13)[c]	0.55 (0.16)[c]
Recent democracy				0.79 (0.12)[c]	0.60 (0.15)[c]
Religious heterogeneity				1.14 (0.22)[c]	1.72 (0.28)[c]
Unemployment rate				0.06 (0.01)[c]	0.07 (0.02)[c]
Percentage non-nationals				0.03 (0.02)	0.03 (0.03)
Cross-level interactions					
Longstanding democracies × education (ref.)					
Interrupted democracies × education					− 0.05 (0.03)
Recent democracies × education					0.10 (0.03)[c]
Religious heterogeneity × education					− 0.31 (0.06)[c]
Unemployment rate × education					− 0.00 (0.00)
Percentage non-nationals × education					0.00 (0.01)
Variance components					
Individual	1.94	1.87	1.84	1.84	1.84
Country	0.24	0.20	0.21	0.03	0.02

$n = 11{,}904$.
[a]$P < 0.10$; [b]$P < 0.05$; [c]$P < 0.01$; [d]This is the model with random slopes for educational attainment.

see, the strength of the educational effect varies across countries. In Great Britain and The Netherlands the educational effect is rather strong (− 0.32), whereas this effect is rather weak in Poland (− 0.12).

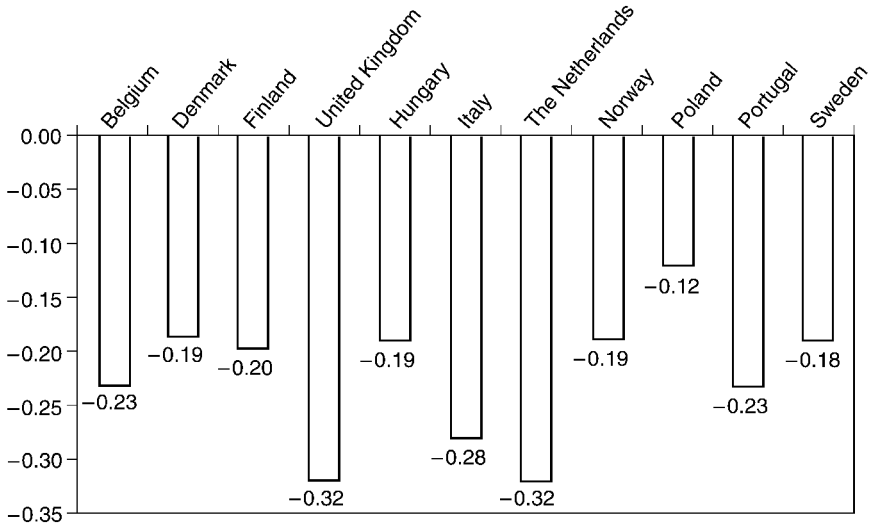

FIG. 1. The strength of the educational effect on ethnic prejudice in 11 European countries. The results are from the random slope model (2b). Country residuals were added to the general educational effect over all countries; not controlled for other individual characteristics.

As we compare the variance components of models 1 and 2b, we see that inclusion of education leads to a reduction of the initial variance at the individual level from 1.94 to 1.87, i.e. almost 4% explained variance. Moreover, the effect of education also explains some of the variance at the country level, since the variance at country level decreases from 0.24 to 0.20, i.e. about 17% explained variance. This indicates that differences in the countries' educational compositions are relevant to the explanation of ethnic prejudice across countries (Snijders and Bosker, 1999, p. 218).

When we control for other individual characteristics in model 3, the strength of the educational effect decreases slightly, but it remains a strong predictor of ethnic prejudice and its effect is still highly significant. Both the self-employed and the pensioned are more prejudiced than the employed (reference category). Age does not have a significant effect on ethnic prejudice, whereas gender does have a rather strong effect: males are more prejudiced than females. Both church attendance and church attendance squared do not have a significant effect, meaning that there is no curvilinear effect. The larger the community size, i.e. the bigger the city one lives in, the less one is prejudiced.

In model 4 we added country characteristics, since the specific context people live in may affect their attitudes towards ethnic minorities and, therefore, country characteristics may affect ethnic prejudice directly. In interrupted democracies, like Italy, people are on average more prejudiced (0.45) than in longstanding democracies. In recent democracies or former state socialism countries, like Hungary and Poland, people are even more prejudiced (0.79). A country's degree of religious

heterogeneity also has a positive effect on ethnic prejudice. Overall, as one can see in Table IV, the more religiously heterogenous a country is, the more prejudiced the residents of that country are on average. With regard to the unemployment rate, one can state that the higher a country's unemployment rate, the more prejudiced the residents of that country are. The percentage of non-nationals does not have a significant effect on the overall level of a country's ethnic prejudice. By including country characteristics, the variance at country level changes from an initial 0.24 to 0.03. This indicates that almost 88% of the initial variance at country level is explained.

In model 5 cross-level interactions between country characteristics and the educational effect on ethnic prejudice are included. We checked whether these country characteristics affect the educational effect on ethnic prejudice in order to test our hypotheses. From the cultural perspective we expected that a country's democratic tradition and its degree of religious heterogeneity would affect the strength of the educational effect on ethnic prejudice. We expected the educational effect to be (i) strongest in longstanding democracies, (ii) weaker in interrupted democracies and (iii) even weaker in recent democracies. It turns out that in interrupted democracies the educational effect does not differ significantly from that in longstanding democracies (reference category). However, in recent democracies the educational effect is significantly weaker, i.e. less negative (0.10), than in longstanding democracies. This means that we have to refute the hypothesis concerning differences in the strength of the educational effect between interrupted and longstanding democracies. However, we do not have to refute the hypothesis regarding differences in the strength of the educational effect between recent and longstanding democracies: in recent democracies the educational effect on ethnic prejudice is weaker than in longstanding democracies.

With respect to a country's degree of religious heterogeneity, we formulated two contradictory hypotheses. First, we proposed that the higher a country's degree of religious heterogeneity, the stronger the effect of education would be, and, second, from religious competition theory we expected that the higher a country's degree of religious heterogeneity, the weaker the educational effect would be. We found support for the first hypothesis: the more religiously heterogeneous a country is, the stronger the (negative) effect of education is ($-$ 0.31).

We also formulated hypotheses pertaining the effect of a country's actual ethnic competition on the strength of the educational effect on ethnic prejudice. However, both a country's unemployment rate and percentage non-nationals do not affect the strength of the educational effect on ethnic prejudice. Therefore, we have to refute these hypotheses.

Finally, our full model explains the variance at country level very well. From an initial 0.24 this variance is eventually reduced to 0.02, largely due to the inclusion of country characteristics. This means that we have explained almost 92% of the initial variance at the country level. However, we have to admit that we have not explained much of the initial variance at the individual level: this is reduced from 1.94 to 1.84. This means that about 5% of the initial variance at the individual level is explained.

CONCLUSION

We started this contribution with the notion that education is often found to be an important determinant of ethnic prejudice. In this study of 11 European countries we again found that education is important in explaining variations in ethnic prejudice. Moreover, this educational effect remains strong even if we control for other individual characteristics. The educational effect on ethnic prejudice is often interpreted as a *universal* liberalizing effect: education is supposed to reduce ethnic prejudice in each and every context. However, we expected that this liberalizing effect of education may not be as *universal* as often is assumed and may vary across national contexts. We actually found that the effect of education on ethnic prejudice varies significantly across countries.

In this contribution we have distinguished two types of explanations for cross-national variances in the educational effect on ethnic prejudice. First, according to a cultural perspective, we regarded education as the degree of exposure to an important socializing agent, i.e. the educational system, in which pupils are taught the dominant norms of society (see for example Dreeben, 1968; Selznick & Steinberg, 1969; Hyman & Wright, 1979). Moreover, we assumed that the higher one's educational level, the longer one has been exposed to society's dominant culture and the more one has internalized society's dominant norms. Second, from a structural perspective, we considered education to indicate social status, i.e. it refers to one's position in society. Those individuals who are well educated enjoy an advantaged position in society compared to the poorly educated. In line with this distinction, we distinguished two types of country characteristics that might affect the educational effect on ethnic prejudice. We considered country characteristics that reflect which norms and values have been transmitted at school (democratic tradition and religious heterogeneity), and second, we studied country characteristics that reflect the actual ethnic competition in a country (unemployment rate and percentage of non-nationals).

In recent democracies the educational effect on ethnic prejudice turns out to be weaker (less negative) than in longstanding democracies, whereas in interrupted democracies the educational effect is equal to the effect in longstanding democracies. This last finding is not in line with Weil's previous findings (1985), as he found that in interrupted democracies the educational effect was weaker than in longstanding democracies. However, in general we found evidence to support his suggestions, since the strength of the educational effect still varies between relatively recent and longstanding democracies. This means that in recent democracies there is only a slight difference between the more educated and the less educated with respect to ethnic prejudice, whereas in longstanding democracies the more educated are considerably less prejudiced than the less educated.

With regard to a country's degree of religious heterogeneity, we found a strong negative cross-level interaction, indicating that the more religiously heterogeneous a country is, the stronger the difference between the more and the less educated with respect to their level of ethnic prejudice, in the sense that the more educated are less prejudiced than the less educated. This implies that we have again found support for

Weil's suggestions and, as a consequence, we have to refute the hypothesis derived from religious competition theory, according to which we expected that the higher a country's degree of religious heterogeneity, the weaker the educational effect would be.

According to the structural perspective on education, we expected that a country's actual ethnic competition would affect the educational effect on ethnic prejudice. Therefore, we included two characteristics that reflect a country's actual ethnic competition: the unemployment rate and the percentage of non-nationals. We can be very brief concerning this, since neither unemployment rate nor percentage of non-nationals affected the strength of the educational effect on ethnic prejudice. This indicates that the difference between more and less educated people with respect to their level of ethnic prejudice does not vary according to a country's degree of actual ethnic competition.

We have shown that the cultural perspective on education is more fruitful. Our findings suggest that cross-national differences in the educational effect on ethnic prejudice are determined by cross-national variances in the transmission of tolerant values through the educational system. The extent to which tolerant values are transmitted through the educational system is influenced by certain country characteristics, i.e. the democratic tradition and the degree of religious heterogeneity. In longstanding democracies and in religiously heterogeneous countries the educational effect on ethnic prejudice is strong, whereas in recent democracies and religiously homogeneous countries the educational effect is rather weak. We found evidence that in longstanding democracies and in religiously heterogeneous societies more tolerant values seem to have been transmitted through the educational system than in recent democracies or religiously homogeneous societies.

NOTES

[1] Although education is often considered to be a determinant of ethnic prejudice in (cross-national) studies, there have been hardly any studies that focussed specifically on the relationship between education and ethnic prejudice in a cross-national perspective. These studies mostly refer to previous cross-national research on values that are related to ethnic prejudice, such as anti-Semitism and anti-democratic values.

[2] For instance, the elite or communal leaders have (in)formal contacts with those who are in charge of the national education programme and who decide what is to be learned at school.

[3] Weil (1985) did not use the term interrupted democracies, as he distinguished only between recent and longstanding democracies, as his data stem from 1959–1982. In those days the, what we call, interrupted democracies had as yet only a short democratic tradition. Moreover, the, what we call, recent democracies (former state socialism societies) were not yet democracies.

[4] At the individual level, actual ethnic competition is determined by the fact that the less educated have to compete more than average with ethnic minorities, since ethnic minorities more often have a low level of education (Kiehl & Werner, 1998). As a consequence, the less educated will be more prejudiced against ethnic minorities.

[5] This procedure provides a more direct test of the nature of the relationship than other procedures involving modelling of church attendance, which would allow for a wide variety of different but, in any case, arbitrary categorizations: Hood *et al.* (1996) ascertain that there is simply no agreement in the literature in this respect. Still, we also tried several models in order to test the robustness of our solution.

[6] Including other individual characteristics as control variables does not affect these cross-national variances in the strength of the educational effect on ethnic prejudice: by including them we get the same parameters.

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APPENDIX. COUNTRY CHARACTERISTICS

TABLE AI. Country characteristics

	Democratic Tradition	Religious heterogeneity[a]	Unemployment rate[b]	Percentage non-nationals[c]
Belgium	Longstanding	0.60	9.3	9.1
Denmark	Longstanding	0.27	7.0	3.8
Finland	Longstanding	0.36	17.0	1.2
Great Britain	Longstanding	0.76	8.6	3.4
Hungary	Recent	0.72	10.2	1.3
Italy	Interrupted	0.38	12.0	1.6
The Netherlands	Longstanding	0.70	7.1	5.0
Norway	Longstanding	0.25	4.9	3.8
Poland	Recent	0.15	13.3	4.0
Portugal	Interrupted	0.45	5.5	1.6
Sweden	Longstanding	0.32	7.7	6.1

[a]Religious heterogeneity is measured by the diversity index which takes the number of denominations in a country into account. In the formula $(1 - \text{sum } (x_n^2))/1 - 1/\text{k})$, where, x represents the different proportions of denominations and k is the number of denominations. Source, Religious and Moral Pluralism data.

[b]Total unemployment rate in 1995. Source, International Labour Office (1998), data for Portugal and Sweden, International Labour Office (1996).

[c]Percentage of non-national citizens in 1995 (related to the total population). Source, OECD (1998); for Hungary and Poland, Hagendoorn *et al.* (1995).